

Camden Hills Regional High School

Philosophy and Goals

Why study mathematics? Just as one must be *literate* to make sense of the written world around oneself, one must also be *numerate* to understand the numbers that pop up in day-to-day life- credit card rates, investment opportunities, tax returns, time zones, probability in gambling, government policy decisions, and more.

Perhaps even more importantly, mathematics is the language of the universe. It describes the world around us- the obvious like the passing of the seasons and phases of the moon, the beautiful and mysterious like Fibonacci patterns in nature, and the powerful like the calculus of motion. Sure, you can live your day-to-day life without any appreciation of this language, just as you probably won't need James Joyce's *Portrait of the Artist* or an understanding of the origins of World War I to be successful in life. I believe, however, that an appreciation of the ubiquity, the beauty, and the power of mathematics is **essential for any educated individual**.

No matter what, all of the mathematics that you learn will teach you **analytic reasoning, logical deduction, and problem solving skills**- and most importantly, the process of learning mathematics will build and strengthen neural pathways in your brain to make you a more flexible thinker. In his influential book *The World Is Flat*, Thomas Friedman argues that learning to learn is one of the most important skills needed for success in a global society. We all need to be lifelong learners.

You are fortunate to have a teacher who finds mathematics both beautiful and exciting, and I will try to impart just a little of that interest to you. We will use the power of technology- pencil & paper, calculators, computer software, the internet- to investigate new ideas. Our focus will be on **understanding** concepts and problems rather than on memorizing and regurgitating answers. To this end, we will work to develop communication skills, both verbally and in writing. You will often be asked to explain your reasoning and to defend your answer. Be prepared to think!

Finally, while perfection in many areas of mathematics is possible, **it is not always necessary or even desirable** in this course. The **process** of learning mathematics will be our focus and we will have fun doing it. You should find the learning **difficult** at times- wrestling with mathematical ideas is challenging when you are truly engaged. The **reward** comes when you master a concept and from that day forward, it is never difficult again. It is my goal to make sure each of you has confidence in your own mathematical ability; I want you to leave this year feeling good about math. Don't be afraid to say you don't get it- **there are no stupid questions in this class**.

Responsibilities

It is my responsibility to come to class each day prepared to teach a meaningful lesson. I need to be relaxed, patient, and good-humoured.

In exchange, I expect you to come to class prepared to learn and explore math. Be respectful of others, attentive, and good-humoured. Ask questions and make contributions. Please bring the following supplies to each class:

independent work for the unit, charged MacBook, textbook, notebook (with paper and any handouts), pencils & pens (at least one color for correcting work)

Textbooks

You are reminded that textbooks remain the property of CHRHS and must be returned in June. Please keep your book covered. No other marks may be made in the books, not even in pencil.

Notebooks

Your notebook is a valuable resource and study tool. It will need to contain notes, handouts, and independent work (IW for the unit will be submitted on test day). You may choose to keep some of your notes on your MacBook.

The **rule of thumb** for taking notes in class is *“If it’s on the board, write it down (or type it!).”*

Independent Work (IW)

Independent work will be given for every class (always available on the class website and in iCal). I believe there are two basic keys to success in mathematics— **questioning** and **practice**. You should always be asking questions like “what if?”, “how come?”, “why?”, “is there another way to do this?”. If you couple your questioning with practice (you can never do too much of this), you will become a successful math student. The more time you spend thinking about and doing mathematics, the easier it will become.

- You should aim to **do your IW with others from class**. Discuss problems. Remember, though, that you need to be able to do each problem on your own, as your friends won’t be there to help during a quiz. Even if you feel that you don’t need any help, I encourage you to assist your classmates—explaining a concept to another person is one of the best ways to reinforce your own understanding. I do ask that you **indicate** with whom you worked in the margin of your IW.
- **Attempt every problem** assigned and show all of your work. Expect to struggle with some problems—you may need to come back and rework problems later in the unit. Check your **notes**. Read your **textbook**. If you don’t know how to start a problem, write down all of the important information. **Draw pictures** and **copy diagrams**. Show evidence of your attempts at a solution *in writing*.
- Your IW will be checked for completion each class. It needs to be **clearly labelled** so that if you are asked to write down your working for a particular problem from a particular day, you will be able to do so.

- When you complete your IW, go back and check problems with answers and correct as necessary in a **different color**. Try to rework problems with mistakes; bring questions to class.
- There will always be time in class to discuss IW problems, but if you still have questions after we have finished discussing your IW, go to **Math Directed Study or see or email me ASAP**.
- I don't assign many repetitive problems. You should plan to work through **additional exercises** from the text whenever you need a review of basic concepts.
- Realistically, there may be occasions when you cannot complete your IW satisfactorily. You should **always be able to at least write down something for each problem before class**, though. Be sure to catch up as soon as possible. Notify me via email before class if you have a valid excuse. Please **never copy** someone else's IW— take responsibility for your education and act with integrity.
- At the end of each unit, IW will be **collected and graded for correctness**. All errors must be clearly marked and corrected in a different color. The IW packet will be graded on the rubric posted on the class website. Since answers and help are available all unit, with effort, all IW will ideally be 100%.

You should not need to spend more than one hour outside of class; if you are taking more than that, tell me. IW that is carefully and conscientiously done will pay off in the long run; math is **not a spectator sport!**

Assessments

IW, warm up exercises, journal writing, quizzes, tests and projects are all forms of assessment. They can be used both to gauge your progress and to spur you on to new understandings of math. Your formal CHRHS grade will come from a mixture of assessments. Some assessments will include a Supercorrections component for additional credit (additional information on the website— to be discussed after the first test). The percentage mix for the class grade will be 50% tests & projects, 30% quizzes & other class assessments, 20% IW (rubrics given in class). The semester exams will count for 20% of the overall semester grade. Please refer to page 9 of your student handbook for an interpretation of the numerical grade.

Assessments should be positive experiences. You should view them as opportunities to demonstrate what you can do. In the process, you will also learn what you still need to master. **I will only assess you** on material that you have had a chance to ask questions about in class.

*Students have the choice not to include these two components in their quarter grades.

Absences

If you know you are going to miss a class, it is your responsibility to ask me in advance for any assignments you will miss. If you are absent, it is your responsibility to get the IW from the **class website** and class notes **from a classmate**. You must have your IW attempted upon return to class (unless you are also absent the day before the next class). If you miss a test or a quiz, you must see me before the next class to set a time to make up the assessment. If you fail to do this, you will take the assessment the first day you are back in class. There is no make-up work for cut classes.

(Course Methodology subject to change following student discussion)

Academic Honesty

Please do your own work; I take academic honesty very seriously. Everything that you learn from another source (tutor, website, friend, etc.) must always be **referenced** and **acknowledged** by writing so in the margin or at the end of the work that is submitted. You must not discuss tests, quizzes, etc. with any students who have not yet taken the test, quiz, etc. Copying of IW is not acceptable. If caught, all parties involved will receive a zero for the work, and your parents will be contacted. I can accept a student saying that “I just couldn’t get it done” much easier than seeing a paper that is the work of another person. Cheating on an assessment is also unacceptable, and the consequences are spelled out in your handbook for such situations. One further consequence is the loss of any future or past letter of recommendation from me. Please do not put yourself, a friend or me in a situation that none of us will be comfortable with. When it comes to academic honesty, **take responsibility for your own education and if in doubt, ask!**

Calculator & Laptop Policy

You are encouraged to make full use of technology for investigating new concepts and working problems where appropriate. You are reminded, however, that since many assessment tasks will have a non-technology component, calculator/computer dependence must be avoided (multiplying single digit numbers on the calculator is a clear sign of dependence!). When in Room 219 during class time, **laptops may only be used for class related activity.**

Communication and Extra Help

The **class website** takes time to maintain, but I believe it is worthwhile. I will periodically make announcements and put interesting links on the site, and I will post each day’s IW and a brief synopsis of the day’s lesson. The website also stands as a record of work for each unit.

Your assessment results will be available online via PowerSchool. **Do not let this information become a source of stress for you.** High school students have a myriad of demands for their attention. I do not assume that mathematics is necessarily your number one priority right now. As long as you’re giving this class an appropriate amount of effort, you have nothing to worry about. Just use these records to monitor your progress. I will also add additional notes and comments in PowerSchool; anything that is highlighted blue and underlined is a link to additional information.

It is very important that you let me know how things are going for you in class. If you have an issue, **tell me!** Problems are usually easiest to solve sooner rather than later. If you have questions outside of class or just want to talk math, stop by my classroom during free time. **Use me!**

Another excellent way to ask questions or let me know how things are going is to **send me an email**, especially outside of class hours. I do my best to reply as soon as I get your email. As I do use email to communicate with students and parents, please ensure that I always have a current email address.